

21) International Application Number: PCT/JP95/562
 22) International Filing Date: 18 September 1998 (18.09.98)
 30) Priority Date: 60059,531 19 September 1997 (19.09.97) US

1) Applicants (for all designated States except US): FUJITSU NETWORK COMMUNICATIONS, INC. [US/US]: 2801 Telecom Parkway, Richardson, TX 75082 (US); FUJITSU LIMITED [JP/JP]: 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki-shi, Kanagawa-ken 211-85 (JP).

2) Inventors; and

3) Inventors/Applicants (for US only): CALDARA, Stephen, A. [US/US]: 75 Bigelow Drive, Sudbury, MA 01776-3217 (US); SLUYSKI, Michael, A. [US/US]: 7 Bent Avenue, Maynard, MA 01754 (US).

4) Agents: LEOVKI, Victor, B. et al.; Weingarten, Schurgin, Gagnella & Hayes LLP, Ten Post Office Square, Boston, MA 02109 (US).

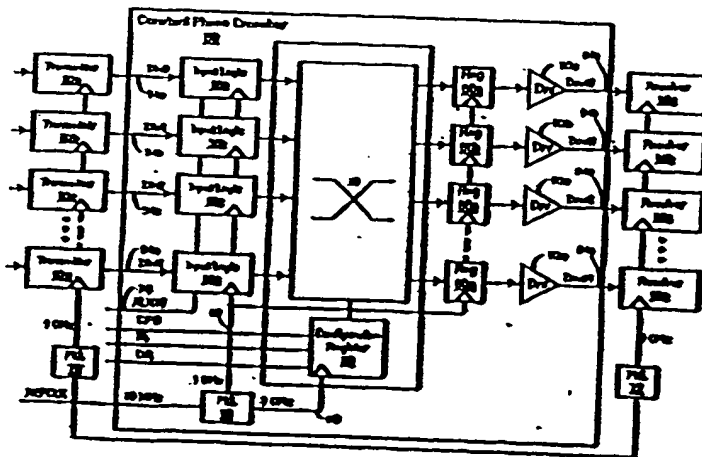
(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GR, GH, GM, HR, HU, ID, IL, IS, JP, KR, KZ, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BI, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Title: CONSTANT PHASE CROSSBAR SWITCH



Abstract

A constant phase crossbar switch system (50) which avoids phase discontinuities at the outputs of the crossbar switch. The crossbar switch system includes input logic (56a—56n), a crossbar switch (58), output logic (60a—60n) and a phase locked loop (68). The phase locked loop is used to generate a high speed internal clock from a system clock. High speed serial data streams transmitted at the internal clock frequency are received from corresponding transmitters and are coupled to the input logic. The input logic generates multiple versions of the serial data stream, one of the versions being undelayed and the other versions delayed by some fraction of a bit time. State machines are employed to select the version of the serial data stream which is within the data stream window, being generally centered with the high speed internal clock. The selected version of the data stream is employed as the active input to the crossbar switch. The undelayed version of each of the data stream is clocked into an output register which is clocked by the internal clock. The selection of the delayed version of the serial data stream in the described manner avoids phase discontinuities upon switching of sourcing transmitters.